



**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

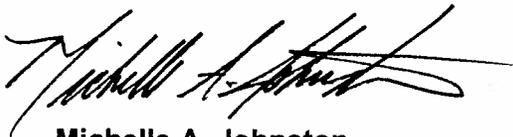
**ANALYTICAL REPORT**

**Perfluorocarbon (PFC) Analysis**

**Lot #: D9K130504**

**Dena Haverland**

**Dalton Utilities  
1200 V.D. Parrot Jr. Parkway  
Dalton, GA 30721**



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Project Manager**

**January 15, 2010**

## Case Narrative

### D9K130504

TestAmerica Denver utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the methods summary page in accordance with the methods indicated. Dilution factors and footnotes are provided on each datasheet to assist in the interpretation of the results.

The results relate only to the samples in this report and meet all requirements of NELAC. All data have been reviewed for compliance with the laboratory QA/QC plan and have found to be compliant with laboratory protocols with any exceptions noted below.

Please note that Non-Detect (ND) results have been evaluated down to the Method Detection Limit (MDL) and should be considered ND at the MDL. Unless otherwise noted, results for solids have been dry weight corrected.

This report shall not be reproduced except in full, without the written approval of the laboratory.

#### **Sample Arrival and Receipt**

The following report contains the analytical results for eight samples received at TestAmerica Denver on November 13, 2009, according to documented sample acceptance procedures. The samples were received in good condition at a temperature of 2.3°C.

Samples DUP#1 and DUP#2 were logged with the same collection date as the sample listed above them on the chain-of-custody. The client was notified on November 13, 2009. On November 16, 2009, the client informed the laboratory the collection date and time for DUP#1 is 11/16/09 11:15 and 11/12/09 15:35 for DUP#2.

No other anomalies were encountered during sample receipt.

#### **Standards**

Analytical standards were prepared using commercially available certified solutions containing all compounds of interest.

The mass labeled compounds 13C4 PFBA, 13C2 PFHxA, 18O2 PFHxS, 13C4 PFOA, 13C4 PFOS, 13C5 PFNA, 13C2 PFDA, 13C2 PFUnA, 13C2 PFDoA, and D3 MeFOSA were introduced at the extraction step and were used for internal standards for the quantitation of the target compounds.

#### **Sample Extraction and Analysis**

The samples presented in this report were extracted for the target analytes by TestAmerica Denver's Standard Operating Procedure (SOP) DV-OP-0019 and analyzed for the target analytes by TestAmerica Denver's SOP DV-LC-0012.

#### **Method QC Samples**

The Method Blank is processed reagent water spiked with internal standard and prepared with each batch of 20 samples of the same matrix. The method blanks were non-detect at the reporting limits for the target analytes.

Each batch is prepared with low and mid level Laboratory Control Samples (LCS). The LCS recoveries for both levels were within established control limits.

Lot #: D9K130504

**Analytical Comments**

Each sample is analyzed to achieve the lowest possible reporting limits within the constraints of the method. Due to high concentrations of target analytes and matrix interference, samples 11-12-09-02, 11-12-09-03, 11-12-09-04, and DUP#2 had to be analyzed at dilutions. The reporting limits have been adjusted relative to the dilutions required. Please note samples 11-12-09-04 and DUP#2 were yellow in color.

The laboratory generated MS/MSD associated with QC batch 9321533 exhibited spike compound recoveries, RPD data, and internal standard recoveries outside the QC control limits for several compounds. The acceptable low-level and mid-level LCS analyses data indicated the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

The Standard Operating Procedure (SOP) was altered slightly for these samples in the sample prep and LC conditions. The alterations are listed below.

Solvents are now the same as they were in the original SOP and run per the following gradient: From 0 to 11 minutes, the flow rate is 0.4 mL/minute and the MeOH ramps up from 25% to 100%. From 11 to 11.01 minutes, the flow rate increases to 0.7 mL/minute and this flow is diverted from the MS. At 13 minutes the flow rate decreases back down to 0.4 mL/minute and 25% MeOH. The column then equilibrates to 14 minutes.

PFTriA and PFTeA now use 13C2 PFUnA as their internal standard instead of 13C2 PFD<sub>o</sub>A.

No other anomalies were observed.

# EXECUTIVE SUMMARY - Detection Highlights

D9K130504

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
<b>11-06-09-01 11/06/09 11:15 001</b>				
Perfluorooctanesulfonate	1.8 J	2.4	ug/kg	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	1.6 J	2.4	ug/kg	DEN -LC-0012
Percent Moisture	17	0.10	%	ASTM D 2216-90
<b>11-06-09-02 11/06/09 12:50 002</b>				
Perfluorooctanesulfonate	29	2.7	ug/kg	DEN -LC-0012
Perfluorooctanoic Acid	26	6.7	ug/kg	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	1.5 J	2.7	ug/kg	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	2.1 J	2.7	ug/kg	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	4.0	2.7	ug/kg	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	3.6	2.7	ug/kg	DEN -LC-0012
Perfluorononanoic acid (PFNA)	9.6	2.7	ug/kg	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	47	2.7	ug/kg	DEN -LC-0012
Perfluoroundecanoic acid (PFUn)	16	6.7	ug/kg	DEN -LC-0012
Perfluorododecanoic acid (PFDo)	13	6.7	ug/kg	DEN -LC-0012
Perfluorotridecanoic acid (PFT)	5.8 J	6.7	ug/kg	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	12	2.7	ug/kg	DEN -LC-0012
Percent Moisture	25	0.10	%	ASTM D 2216-90
<b>DUP#1 11/06/09 11:15 003</b>				
Perfluorooctanesulfonate	1.6 J	2.4	ug/kg	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	1.6 J	2.4	ug/kg	DEN -LC-0012
Perfluorododecanoic acid (PFDo)	1.1 J	6.0	ug/kg	DEN -LC-0012
Percent Moisture	17	0.10	%	ASTM D 2216-90
<b>11-12-09-01 11/12/09 10:13 004</b>				
Perfluorooctanesulfonate	13	2.8	ug/kg	DEN -LC-0012
Perfluorooctanoic Acid	25	6.9	ug/kg	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	2.5 J	2.8	ug/kg	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	2.7 J	2.8	ug/kg	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	3.8	2.8	ug/kg	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	2.8	2.8	ug/kg	DEN -LC-0012
Perfluorononanoic acid (PFNA)	7.9	2.8	ug/kg	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	78	2.8	ug/kg	DEN -LC-0012
Perfluoroundecanoic acid (PFUn)	19	6.9	ug/kg	DEN -LC-0012
Perfluorododecanoic acid (PFDo)	33	6.9	ug/kg	DEN -LC-0012
Perfluorotridecanoic acid (PFT)	9.8	6.9	ug/kg	DEN -LC-0012
Perfluorotetradecanoic acid (P)	5.1 J	6.9	ug/kg	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	14	2.8	ug/kg	DEN -LC-0012
Perfluorooctane sulfonamide (F)	4.3 J	6.9	ug/kg	DEN -LC-0012

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## EXECUTIVE SUMMARY - Detection Highlights

D9K130504

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
<b>11-12-09-01 11/12/09 10:13 004</b>				
Percent Moisture	27	0.10	%	ASTM D 2216-90
<b>11-12-09-02 11/12/09 10:38 005</b>				
Perfluorooctanesulfonate	75	2.7	ug/kg	DEN -LC-0012
Perfluorooctanoic Acid	70	6.7	ug/kg	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	5.7	2.7	ug/kg	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	6.7	2.7	ug/kg	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	10	2.7	ug/kg	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	8.4	2.7	ug/kg	DEN -LC-0012
Perfluorononanoic acid (PFNA)	37	2.7	ug/kg	DEN -LC-0012
Perfluoroundecanoic acid (PFUn)	86	6.7	ug/kg	DEN -LC-0012
Perfluorododecanoic acid (PFDo)	70	6.7	ug/kg	DEN -LC-0012
Perfluorotridecanoic acid (PFT)	35	6.7	ug/kg	DEN -LC-0012
Perfluorotetradecanoic acid (P	8.9	6.7	ug/kg	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	38	2.7	ug/kg	DEN -LC-0012
Perfluorodecane sulfonamide (F	21	6.7	ug/kg	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	220	13	ug/kg	DEN -LC-0012
Percent Moisture	26	0.10	%	ASTM D 2216-90
<b>11-12-09-03 11/12/09 15:02 006</b>				
Perfluorooctanesulfonate	87	2.6	ug/kg	DEN -LC-0012
Perfluorooctanoic Acid	32	6.6	ug/kg	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	2.9	2.6	ug/kg	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	2.9	2.6	ug/kg	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	5.4	2.6	ug/kg	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	4.8	2.6	ug/kg	DEN -LC-0012
Perfluorononanoic acid (PFNA)	17	2.6	ug/kg	DEN -LC-0012
Perfluoroundecanoic acid (PFUn)	77	6.6	ug/kg	DEN -LC-0012
Perfluorododecanoic acid (PFDo)	76	6.6	ug/kg	DEN -LC-0012
Perfluorotridecanoic acid (PFT)	31	6.6	ug/kg	DEN -LC-0012
Perfluorotetradecanoic acid (P	9.8	6.6	ug/kg	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	24	2.6	ug/kg	DEN -LC-0012
Perfluorooctane sulfonamide (F	20	6.6	ug/kg	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	160	13	ug/kg	DEN -LC-0012
Percent Moisture	24	0.10	%	ASTM D 2216-90
<b>11-12-09-04 11/12/09 15:35 007</b>				
Perfluorooctanesulfonate	320	28	ug/kg	DEN -LC-0012
Perfluorooctanoic Acid	560	71	ug/kg	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	12 J	28	ug/kg	DEN -LC-0012

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# EXECUTIVE SUMMARY - Detection Highlights

D9KL30504

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
<b>11-12-09-04 11/12/09 15:35 007</b>				
Perfluoropentanoic acid (PFPA)	19 J	28	ug/kg	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	45	28	ug/kg	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	50	28	ug/kg	DEN -LC-0012
Perfluorononanoic acid (PFNA)	150	28	ug/kg	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	960	28	ug/kg	DEN -LC-0012
Perfluoroundecanoic acid (PFUn)	350	71	ug/kg	DEN -LC-0012
Perfluorododecanoic acid (PFDo)	240	71	ug/kg	DEN -LC-0012
Perfluorotridecanoic acid (PFT)	87	71	ug/kg	DEN -LC-0012
Perfluorotetradecanoic acid (P)	21 J	71	ug/kg	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	110	28	ug/kg	DEN -LC-0012
Perfluorooctane sulfonamide (F)	170	71	ug/kg	DEN -LC-0012
Percent Moisture	30	0.10	%	ASTM D 2216-90

**DUP#2 11/12/09 15:35 008**

Perfluorooctanesulfonate	290	28	ug/kg	DEN -LC-0012
Perfluorooctanoic Acid	780	69	ug/kg	DEN -LC-0012
Perfluorobutanoic acid (PFBA)	16 J	28	ug/kg	DEN -LC-0012
Perfluoropentanoic acid (PFPA)	20 J	28	ug/kg	DEN -LC-0012
Perfluorohexanoic acid (PFHxA)	49	28	ug/kg	DEN -LC-0012
Perfluoroheptanoic acid (PFHpA)	60	28	ug/kg	DEN -LC-0012
Perfluorononanoic acid (PFNA)	210	28	ug/kg	DEN -LC-0012
Perfluoroundecanoic acid (PFUn)	420	69	ug/kg	DEN -LC-0012
Perfluorododecanoic acid (PFDo)	290	69	ug/kg	DEN -LC-0012
Perfluorotridecanoic acid (PFT)	130	69	ug/kg	DEN -LC-0012
Perfluorotetradecanoic acid (P)	30 J	69	ug/kg	DEN -LC-0012
Perfluorobutane sulfonate (PFB)	140	28	ug/kg	DEN -LC-0012
Perfluorooctane sulfonamide (F)	140	69	ug/kg	DEN -LC-0012
Perfluorodecanoic acid (PFDA)	2000	55	ug/kg	DEN -LC-0012
Percent Moisture	28	0.10	%	ASTM D 2216-90

# METHODS SUMMARY

D9K130504

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Method for Determination of Water Content of Soil	ASTM D 2216-90	ASTM D2216-90

## References:

ASTM      Annual Book Of ASTM Standards.

DEN      Severn Trent Laboratores, Denver, Facility Standard  
Operating Procedure.

# METHOD / ANALYST SUMMARY

D9K130504

<u>ANALYTICAL METHOD</u>	<u>ANALYST</u>	<u>ANALYST ID</u>
ASTM D 2216-90	Braden H. Peterson	6733
DEN -LC-0012	Andria Lenoble	000800
DEN -LC-0012	Jacqueline Bonnett	003601

## References:

ASTM      Annual Book Of ASTM Standards.

DEN      Severn Trent Laboratores, Denver, Facility Standard  
Operating Procedure.

# SAMPLE SUMMARY

D9K130504

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
LPE8G	001	11-06-09-01	11/06/09	11:15
LPE8T	002	11-06-09-02	11/06/09	12:50
LPE81	003	DUP#1	11/06/09	11:15
LPE82	004	11-12-09-01	11/12/09	10:13
LPE83	005	11-12-09-02	11/12/09	10:38
LPE84	006	11-12-09-03	11/12/09	15:02
LPE85	007	11-12-09-04	11/12/09	15:35
LPE86	008	DUP#2	11/12/09	15:35

## NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Dalton Utilities

Client Sample ID: 11-06-09-01

HPLC

Lot-Sample #....: D9K130504-001    Work Order #....: LPE8G1AC    Matrix.....: SOLID  
Date Sampled....: 11/06/09 11:15    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/04/09  
Prep Batch #....: 9321533    Analysis Time...: 23:18  
Dilution Factor: 1  
% Moisture.....: 17    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanesulfonate	1.8 J	2.4	ug/kg	0.45
Perfluorooctanoic Acid	ND	6.0	ug/kg	1.2

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	79	(50 - 200)
13C4 PFOS	77	(50 - 200)

**NOTE (S):**

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: 11-06-09-01

HPLC

Lot-Sample #...: D9K130504-001    Work Order #...: LPE8G2AC    Matrix.....: SOLID  
 Date Sampled...: 11/06/09 11:15    Date Received...: 11/13/09  
 Prep Date.....: 11/17/09    Analysis Date...: 12/24/09  
 Prep Batch #...: 9321533    Analysis Time...: 13:27  
 Dilution Factor: 1  
 % Moisture.....: 17    Method.....: DEN -LC-0012

PARAMETER	RESULT	LIMIT	UNITS	MDL
Perfluorobutanoic acid (PFBA)	ND	2.4	ug/kg	0.41
Perfluoropentanoic acid (PFPA)	ND	2.4	ug/kg	1.1
Perfluorohexanoic acid (PFHxA)	ND	2.4	ug/kg	0.24
Perfluoroheptanoic acid (PFHpA)	ND	2.4	ug/kg	0.87
Perfluorononanoic acid (PFNA)	ND	2.4	ug/kg	0.60
Perfluorodecanoic acid (PFDA)	1.6 J	2.4	ug/kg	0.91
Perfluoroundecanoic acid (PFUnA)	ND	6.0	ug/kg	2.2
Perfluorododecanoic acid (PFDoA)	ND	6.0	ug/kg	0.99
Perfluorotridecanoic acid (PFTriA)	ND	6.0	ug/kg	1.4
Perfluorotetradecanoic acid (PFTeA)	ND	6.0	ug/kg	1.7
Perfluorobutane sulfonate (PFBS)	ND	2.4	ug/kg	1.0
Perfluorohexane sulfonate (PFHxS)	ND	2.4	ug/kg	0.93
Perfluorooctane sulfonamide (PFOSA)	ND	6.0	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
MeFOSA	98	(50 - 200)
13C4 PFOA	144	(50 - 200)
13C4 PFOS	128	(50 - 200)
13C4 PFBA	86	(50 - 200)
13C2 PFHxA	115	(50 - 200)
18O2 PFHxS	118	(50 - 200)
13C5 PFNA	125	(50 - 200)
13C2 PFDA	136	(50 - 200)
13C2 PFUnA	115	(50 - 200)
13C2 PFDoA	103	(50 - 200)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: 11-06-09-02

HPLC

Lot-Sample #....: D9K130504-002    Work Order #....: LPE8T1AA    Matrix.....: SOLID  
Date Sampled....: 11/06/09 12:50    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/04/09  
Prep Batch #....: 9321533    Analysis Time...: 23:23  
Dilution Factor: 1  
% Moisture.....: 25    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanesulfonate	29	2.7	ug/kg	0.50
Perfluorooctanoic Acid	26	6.7	ug/kg	1.4

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
13C4 PFOA	73	(50 - 200)
13C4 PFOS	76	(50 - 200)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: 11-06-09-02

HPLC

Lot-Sample #....: D9K130504-002 Work Order #....: LPE8T2AA Matrix.....: SOLID  
 Date Sampled....: 11/06/09 12:50 Date Received...: 11/13/09  
 Prep Date.....: 11/17/09 Analysis Date...: 12/24/09  
 Prep Batch #....: 9321533 Analysis Time...: 13:57  
 Dilution Factor: 1  
 % Moisture.....: 25 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorobutanoic acid (PFBA)	1.5 J	2.7	ug/kg	0.46
Perfluoropentanoic acid (PFPA)	2.1 J	2.7	ug/kg	1.2
Perfluorohexanoic acid (PFHxA)	4.0	2.7	ug/kg	0.27
Perfluoroheptanoic acid (PFHpA)	3.6	2.7	ug/kg	0.97
Perfluorononanoic acid (PFNA)	9.6	2.7	ug/kg	0.67
Perfluorodecanoic acid (PFDA)	47	2.7	ug/kg	1.0
Perfluoroundecanoic acid (PFUnA)	16	6.7	ug/kg	2.4
Perfluorododecanoic acid (PFDoA)	13	6.7	ug/kg	1.1
Perfluorotridecanoic acid (PFTriA)	5.8 J	6.7	ug/kg	1.5
Perfluorotetradecanoic acid (PFTeA)	ND	6.7	ug/kg	1.9
Perfluorobutane sulfonate (PFBS)	12	2.7	ug/kg	1.1
Perfluorohexane sulfonate (PFHxS)	ND	2.7	ug/kg	1.0
Perfluorooctane sulfonamide (FOSA)	ND	6.7	ug/kg	1.7

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
MeFOSA	86	(50 - 200)
13C4 PFOA	115	(50 - 200)
13C4 PFOS	114	(50 - 200)
13C4 PFBA	86	(50 - 200)
13C2 PFHxA	106	(50 - 200)
18O2 PFHxS	111	(50 - 200)
13C5 PFNA	106	(50 - 200)
13C2 PFDA	113	(50 - 200)
13C2 PFUnA	93	(50 - 200)
13C2 PFDoA	82	(50 - 200)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: DUP#1

HPLC

Lot-Sample #....: D9K130504-003    Work Order #....: LPE811AA    Matrix.....: SOLID  
Date Sampled....: 11/06/09 11:15    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/04/09  
Prep Batch #....: 9321533    Analysis Time...: 23:28  
Dilution Factor: 1  
% Moisture.....: 17    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanesulfonate	1.6 J	2.4	ug/kg	0.45
Perfluorooctanoic Acid	ND	6.0	ug/kg	1.2

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C4 PFOA	75	(50 - 200)
13C4 PFOS	76	(50 - 200)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: DUP#1

HPLC

Lot-Sample #....: D9K130504-003    Work Order #....: LPE812AA    Matrix.....: SOLID  
 Date Sampled....: 11/06/09 11:15    Date Received...: 11/13/09  
 Prep Date.....: 11/17/09    Analysis Date...: 12/24/09  
 Prep Batch #....: 9321533    Analysis Time...: 14:12  
 Dilution Factor: 1  
 % Moisture.....: 17    Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorobutanoic acid (PFBA)	ND	2.4	ug/kg	0.41
Perfluoropentanoic acid (PFPA)	ND	2.4	ug/kg	1.1
Perfluorohexanoic acid (PFHxA)	ND	2.4	ug/kg	0.24
Perfluoroheptanoic acid (PFHpA)	ND	2.4	ug/kg	0.87
Perfluorononanoic acid (PFNA)	ND	2.4	ug/kg	0.60
Perfluorodecanoic acid (PFDA)	1.6 J	2.4	ug/kg	0.91
Perfluoroundecanoic acid (PFUnA)	ND	6.0	ug/kg	2.2
Perfluorododecanoic acid (PFDoA)	1.1 J	6.0	ug/kg	0.99
Perfluorotridecanoic acid (PFTriA)	ND	6.0	ug/kg	1.4
Perfluorotetradecanoic acid (PFTeA)	ND	6.0	ug/kg	1.7
Perfluorobutane sulfonate (PFBS)	ND	2.4	ug/kg	1.0
Perfluorohexane sulfonate (PFHxS)	ND	2.4	ug/kg	0.93
Perfluorooctane sulfonamide (PFOSA)	ND	6.0	ug/kg	1.5

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
MeFOSA	85	(50 - 200)
13C4 PFOA	128	(50 - 200)
13C4 PFOS	118	(50 - 200)
13C4 PFBA	85	(50 - 200)
13C2 PFHxA	108	(50 - 200)
18O2 PFHxS	107	(50 - 200)
13C5 PFNA	109	(50 - 200)
13C2 PFDA	124	(50 - 200)
13C2 PFUnA	102	(50 - 200)
13C2 PFDoA	86	(50 - 200)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: 11-12-09-01

HPLC

Lot-Sample #....: D9K130504-004    Work Order #....: LPE821AA    Matrix.....: SOLID  
Date Sampled...: 11/12/09 10:13    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/04/09  
Prep Batch #....: 9321533    Analysis Time...: 23:33  
Dilution Factor: 1  
% Moisture.....: 27    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanesulfonate	13	2.8	ug/kg	0.52
Perfluorooctanoic Acid	25	6.9	ug/kg	1.4

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
13C4 PFOA	66	(50 - 200)
13C4 PFOS	72	(50 - 200)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: 11-12-09-01

HPLC

Lot-Sample #....: D9K130504-004    Work Order #....: LPE822AA    Matrix.....: SOLID  
 Date Sampled....: 11/12/09 10:13    Date Received...: 11/13/09  
 Prep Date.....: 11/17/09    Analysis Date...: 12/24/09  
 Prep Batch #....: 9321533    Analysis Time...: 14:47  
 Dilution Factor: 1  
 % Moisture.....: 27    Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorobutanoic acid (PFBA)	2.5 J	2.8	ug/kg	0.47
Perfluoropentanoic acid (PFPA)	2.7 J	2.8	ug/kg	1.2
Perfluorohexanoic acid (PFHxA)	3.8	2.8	ug/kg	0.28
Perfluoroheptanoic acid (PFHpA)	2.8	2.8	ug/kg	0.99
Perfluorononanoic acid (PFNA)	7.9	2.8	ug/kg	0.69
Perfluorodecanoic acid (PFDA)	78	2.8	ug/kg	1.0
Perfluoroundecanoic acid (PFUnA)	19	6.9	ug/kg	2.5
Perfluorododecanoic acid (PFDoA)	33	6.9	ug/kg	1.1
Perfluorotridecanoic acid (PFTriA)	9.8	6.9	ug/kg	1.6
Perfluorotetradecanoic acid (PFTeA)	5.1 J	6.9	ug/kg	2.0
Perfluorobutane sulfonate (PFBs)	14	2.8	ug/kg	1.1
Perfluorohexane sulfonate (PFHxS)	ND	2.8	ug/kg	1.1
Perfluorooctane sulfonamide (PFOSA)	4.3 J	6.9	ug/kg	1.7

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
MeFOSA	83	(50 - 200)
13C4 PFOA	121	(50 - 200)
13C4 PFOS	112	(50 - 200)
13C4 PFBA	84	(50 - 200)
13C2 PFHxA	105	(50 - 200)
18O2 PFHxS	103	(50 - 200)
13C5 PFNA	110	(50 - 200)
13C2 PFDA	112	(50 - 200)
13C2 PFUnA	100	(50 - 200)
13C2 PFDoA	87	(50 - 200)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: 11-12-09-02

HPLC

Lot-Sample #....: D9K130504-005    Work Order #....: LPE831AA    Matrix.....: SOLID  
Date Sampled....: 11/12/09 10:38    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/04/09  
Prep Batch #....: 9321533    Analysis Time...: 23:38  
Dilution Factor: 1  
% Moisture.....: 26    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanesulfonate	75	2.7	ug/kg	0.51
Perfluorooctanoic Acid	70	6.7	ug/kg	1.4

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
13C4 PFOA	62	(50 - 200)
13C4 PFOS	72	(50 - 200)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: 11-12-09-02

HPLC

Lot-Sample #....: D9K130504-005    Work Order #....: LPE832AA    Matrix.....: SOLID  
 Date Sampled....: 11/12/09 10:38    Date Received...: 11/13/09  
 Prep Date.....: 11/17/09    Analysis Date...: 12/24/09  
 Prep Batch #....: 9321533    Analysis Time...: 15:02  
 Dilution Factor: 1  
 % Moisture.....: 26    Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorobutanoic acid (PFBA)	5.7	2.7	ug/kg	0.46
Perfluoropentanoic acid (PFPA)	6.7	2.7	ug/kg	1.2
Perfluorohexanoic acid (PFHxA)	10	2.7	ug/kg	0.27
Perfluoroheptanoic acid (PFHpA)	8.4	2.7	ug/kg	0.97
)				
Perfluorononanoic acid (PFNA)	37	2.7	ug/kg	0.67
Perfluoroundecanoic acid (PFUnA)	86	6.7	ug/kg	2.4
A)				
Perfluorododecanoic acid (PFDoA)	70	6.7	ug/kg	1.1
A)				
Perfluorotridecanoic acid (PFT ria)	35	6.7	ug/kg	1.5
Perfluorotetradecanoic acid (P FTeA)	8.9	6.7	ug/kg	2.0
Perfluorobutane sulfonate (PFB S)	38	2.7	ug/kg	1.1
Perfluorohexane sulfonate (PFH xS)	ND	2.7	ug/kg	1.0
Perfluorooctane sulfonamide (F OSA)	21	6.7	ug/kg	1.7

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
MeFOSA	103	(50 - 200)
13C4 PFOA	126	(50 - 200)
13C4 PFOS	131	(50 - 200)
13C4 PFBA	91	(50 - 200)
13C2 PFHxA	114	(50 - 200)
18O2 PFHxS	115	(50 - 200)
13C5 PFNA	119	(50 - 200)
13C2 PFUnA	120	(50 - 200)
13C2 PFDoA	109	(50 - 200)

NOTE(S) :

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: 11-12-09-02

HPLC

Lot-Sample #....: D9K130504-005    Work Order #....: LPE833AA    Matrix.....: SOLID  
Date Sampled....: 11/12/09 10:38    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/31/09  
Prep Batch #....: 9321533    Analysis Time...: 10:50  
Dilution Factor: 5  
% Moisture.....: 26    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorodecanoic acid (PFDA)	220	13	ug/kg	5.1
<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>		
13C2 PFDA	87	(50 - 200)		

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: 11-12-09-03

HPLC

Lot-Sample #....: D9K130504-006    Work Order #....: LPE841AA    Matrix.....: SOLID  
Date Sampled...: 11/12/09 15:02    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/04/09  
Prep Batch #....: 9321533    Analysis Time...: 23:48  
Dilution Factor: 1  
% Moisture.....: 24    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanesulfonate	87	2.6	ug/kg	0.50
Perfluorooctanoic Acid	32	6.6	ug/kg	1.3

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
13C4 PFOA	72	(50 - 200)
13C4 PFOS	83	(50 - 200)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: 11-12-09-03

HPLC

Lot-Sample #....: D9K130504-006    Work Order #....: LPE842AA    Matrix.....: SOLID  
 Date Sampled....: 11/12/09 15:02    Date Received...: 11/13/09  
 Prep Date.....: 11/17/09    Analysis Date...: 12/24/09  
 Prep Batch #....: 9321533    Analysis Time...: 15:17  
 Dilution Factor: 1  
 % Moisture.....: 24    Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorobutanoic acid (PFBA)	2.9	2.6	ug/kg	0.45
Perfluoropentanoic acid (PFPA)	2.9	2.6	ug/kg	1.2
Perfluorohexanoic acid (PFHxA)	5.4	2.6	ug/kg	0.27
Perfluoroheptanoic acid (PFHpA)	4.8	2.6	ug/kg	0.96
)				
Perfluorononanoic acid (PFNA)	17	2.6	ug/kg	0.66
Perfluoroundecanoic acid (PFUnA)	77	6.6	ug/kg	2.4
Perfluorododecanoic acid (PFDoA)	76	6.6	ug/kg	1.1
)				
Perfluorotridecanoic acid (PFTria)	31	6.6	ug/kg	1.5
Perfluorotetradecanoic acid (PFTeA)	9.8	6.6	ug/kg	1.9
Perfluorobutane sulfonate (PFBS)	24	2.6	ug/kg	1.1
Perfluorohexane sulfonate (PFHxS)	ND	2.6	ug/kg	1.0
Perfluorooctane sulfonamide (PFOSA)	20	6.6	ug/kg	1.6

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
MeFOSA	83	(50 - 200)
13C4 PFOA	97	(50 - 200)
13C4 PFOS	108	(50 - 200)
13C4 PFBA	73	(50 - 200)
13C2 PFHxA	94	(50 - 200)
1802 PFHxS	100	(50 - 200)
13C5 PFNA	101	(50 - 200)
13C2 PFUnA	100	(50 - 200)
13C2 PFDoA	87	(50 - 200)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: 11-12-09-03

HPLC

Lot-Sample #....: D9K130504-006    Work Order #....: LPE843AA    Matrix.....: SOLID  
Date Sampled...: 11/12/09 15:02    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/31/09  
Prep Batch #....: 9321533    Analysis Time...: 11:05  
Dilution Factor: 5  
% Moisture.....: 24    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorodecanoic acid (PFDA)	160	13	ug/kg	5.0
<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>		
13C2 PFDA	81	(50 - 200)		

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: 11-12-09-04

HPLC

Lot-Sample #....: D9K130504-007    Work Order #....: LPE851AA    Matrix.....: SOLID  
Date Sampled....: 11/12/09 15:35    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/05/09  
Prep Batch #....: 9321533    Analysis Time...: 12:24  
Dilution Factor: 10  
% Moisture.....: 30    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanesulfonate	320	28	ug/kg	5.3
Perfluorooctanoic Acid	560	71	ug/kg	14

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
13C4 PFOA	102	(50 - 200)
13C4 PFOS	111	(50 - 200)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: 11-12-09-04

HPLC

Lot-Sample #....: D9K130504-007    Work Order #....: LPE852AA    Matrix.....: SOLID  
 Date Sampled....: 11/12/09 15:35    Date Received...: 11/13/09  
 Prep Date.....: 11/17/09    Analysis Date...: 12/24/09  
 Prep Batch #....: 9321533    Analysis Time...: 15:32  
 Dilution Factor: 10  
 % Moisture.....: 30    Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorobutanoic acid (PFBA)	12 J	28	ug/kg	4.8
Perfluoropentanoic acid (PFPA)	19 J	28	ug/kg	13
Perfluorohexanoic acid (PFHxA)	45	28	ug/kg	2.9
Perfluoroheptanoic acid (PFHpA)	50	28	ug/kg	10
Perfluorononanoic acid (PFNA)	150	28	ug/kg	7.1
Perfluorodecanoic acid (PFDA)	960	28	ug/kg	11
Perfluoroundecanoic acid (PFUnA)	350	71	ug/kg	26
Perfluorododecanoic acid (PFDoA)	240	71	ug/kg	12
Perfluorotridecanoic acid (PFTriA)	87	71	ug/kg	16
Perfluorotetradecanoic acid (PFTeA)	21 J	71	ug/kg	21
Perfluorobutane sulfonate (PFBS)	110	28	ug/kg	12
Perfluorohexane sulfonate (PFHxS)	ND	28	ug/kg	11
Perfluorooctane sulfonamide (PFOSA)	170	71	ug/kg	18

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
MeFOSA	109	(50 - 200)
13C4 PFOA	117	(50 - 200)
13C4 PFOS	130	(50 - 200)
13C4 PFBA	105	(50 - 200)
13C2 PFHxA	121	(50 - 200)
18O2 PFHxS	128	(50 - 200)
13C5 PFNA	123	(50 - 200)
13C2 PFDA	116	(50 - 200)
13C2 PFUnA	98	(50 - 200)
13C2 PFDoA	68	(50 - 200)

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: DUP#2

HPLC

Lot-Sample #...: D9K130504-008    Work Order #...: LPE861AA    Matrix.....: SOLID  
Date Sampled...: 11/12/09 15:35    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/05/09  
Prep Batch #...: 9321533    Analysis Time...: 12:29  
Dilution Factor: 10  
% Moisture.....: 28    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctanesulfonate	290	28	ug/kg	5.2
Perfluorooctanoic Acid	780	69	ug/kg	14

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
13C4 PFOA	102	(50 - 200)
13C4 PFOS	110	(50 - 200)

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: DUP#2

HPLC

Lot-Sample #....: D9K130504-008    Work Order #....: LPE862AA    Matrix.....: SOLID  
 Date Sampled....: 11/12/09 15:35    Date Received...: 11/13/09  
 Prep Date.....: 11/17/09    Analysis Date...: 12/24/09  
 Prep Batch #....: 9321533    Analysis Time...: 15:47  
 Dilution Factor: 10  
 % Moisture.....: 28    Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorobutanoic acid (PFBA)	16 J	28	ug/kg	4.7
Perfluoropentanoic acid (PFPA)	20 J	28	ug/kg	12
Perfluorohexanoic acid (PFHxA)	49	28	ug/kg	2.8
Perfluoroheptanoic acid (PFHpA)	60	28	ug/kg	10
)				
Perfluorononanoic acid (PFNA)	210	28	ug/kg	6.9
Perfluoroundecanoic acid (PFUnA)	420	69	ug/kg	25
A)				
Perfluorododecanoic acid (PFDoA)	290	69	ug/kg	11
A)				
Perfluorotridecanoic acid (PFTria)	130	69	ug/kg	16
Perfluorotetradecanoic acid (PFTeA)	30 J	69	ug/kg	20
Perfluorobutane sulfonate (PFBS)	140	28	ug/kg	12
Perfluorohexane sulfonate (PFHxS)	ND	28	ug/kg	11
Perfluorooctane sulfonamide (FOSA)	140	69	ug/kg	17

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
MeFOSA	116	(50 - 200)
13C4 PFOA	127	(50 - 200)
13C4 PFOS	145	(50 - 200)
13C4 PFBA	110	(50 - 200)
13C2 PFHxA	130	(50 - 200)
18O2 PFHxS	135	(50 - 200)
13C5 PFNA	130	(50 - 200)
13C2 PFUnA	124	(50 - 200)
13C2 PFDoA	98	(50 - 200)

**NOTE(S) :**

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Dalton Utilities

Client Sample ID: DUP#2

HPLC

Lot-Sample #....: D9K130504-008    Work Order #....: LPE863AA    Matrix.....: SOLID  
Date Sampled....: 11/12/09 15:35    Date Received...: 11/13/09  
Prep Date.....: 11/17/09    Analysis Date...: 12/31/09  
Prep Batch #....: 9321533    Analysis Time...: 11:20  
Dilution Factor: 20  
\* Moisture.....: 28    Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorodecanoic acid (PFDA)	2000	55	ug/kg	21
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>		
	<u>RECOVERY</u>	<u>LIMITS</u>		
13C2 PFDA	75	(50 - 200)		

**NOTE (S) :**

Results and reporting limits have been adjusted for dry weight.

Dalton Utilities

Client Sample ID: 11-06-09-01

General Chemistry

Lot-Sample #....: D9K130504-001    Work Order #....: LPE8G    Matrix.....: SOLID  
Date Sampled....: 11/06/09 11:15    Date Received...: 11/13/09  
% Moisture.....: 17

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	17	0.10	%	ASTM D 2216-90	11/14/09	9318055
		Dilution Factor: 1		Analysis Time...: 12:00	MDL.....: 0.0	

Dalton Utilities

Client Sample ID: 11-06-09-02

General Chemistry

Lot-Sample #....: D9K130504-002    Work Order #....: LPE8T    Matrix.....: SOLID  
Date Sampled....: 11/06/09 12:50    Date Received...: 11/13/09  
% Moisture.....: 25

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	25	0.10	%	ASTM D 2216-90	11/14/09	9318055
		Dilution Factor: 1		Analysis Time...: 12:00	MDL.....: 0.0	

Dalton Utilities

Client Sample ID: DUP#1

General Chemistry

Lot-Sample #...: D9K130504-003    Work Order #...: LPE81    Matrix.....: SOLID  
Date Sampled...: 11/06/09 11:15    Date Received...: 11/13/09  
% Moisture.....: 17

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	17	0.10	%	ASTM D 2216-90	11/14/09	9318055
		Dilution Factor: 1		Analysis Time...: 12:00	MDL.....: 0.0	

Dalton Utilities

Client Sample ID: 11-12-09-01

General Chemistry

Lot-Sample #....: D9K130504-004    Work Order #....: LPE82    Matrix.....: SOLID  
Date Sampled....: 11/12/09 10:13    Date Received...: 11/13/09  
% Moisture.....: 27

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	27	0.10	%	ASTM D 2216-90	11/14/09	9318055
		Dilution Factor: 1		Analysis Time...: 12:00	MDL.....: 0.0	

Dalton Utilities

Client Sample ID: 11-12-09-02

General Chemistry

Lot-Sample #....: D9K130504-005    Work Order #....: LPE83    Matrix.....: SOLID  
Date Sampled....: 11/12/09 10:38    Date Received...: 11/13/09  
% Moisture.....: 26

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	26	0.10	%	ASTM D 2216-90	11/14/09	9318055
		Dilution Factor: 1		Analysis Time...: 12:00	MDL.....: 0.0	

Dalton Utilities

Client Sample ID: 11-12-09-03

General Chemistry

Lot-Sample #....: D9K130504-006    Work Order #....: LPE84    Matrix.....: SOLID  
Date Sampled....: 11/12/09 15:02    Date Received...: 11/13/09  
% Moisture.....: 24

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	24	0.10	%	ASTM D 2216-90	11/14/09	9318055
		Dilution Factor: 1		Analysis Time...: 12:00	MDL.....: 0.0	

Dalton Utilities

Client Sample ID: 11-12-09-04

General Chemistry

Lot-Sample #....: D9K130504-007    Work Order #....: LPE85    Matrix.....: SOLID  
Date Sampled....: 11/12/09 15:35    Date Received...: 11/13/09  
% Moisture.....: 30

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	30	0.10	%	ASTM D 2216-90	11/14/09	9318055
		Dilution Factor: 1		Analysis Time...: 12:00	MDL.....: 0.0	

Dalton Utilities

Client Sample ID: DUP#2

General Chemistry

Lot-Sample #....: D9K130504-008    Work Order #....: LPE86    Matrix.....: SOLID  
Date Sampled....: 11/12/09 15:35    Date Received...: 11/13/09  
% Moisture.....: 28

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Percent Moisture	28	0.10	%	ASTM D 2216-90	11/14/09	9318055
		Dilution Factor: 1		Analysis Time...: 12:00	MDL.....: 0.0	